Meat and Poultry Inspection 1978

Report of the Secretary of Agriculture to the Committee on Agriculture House of Representatives

Committee on Agriculture, Nutrition, and Forestry, U.S. Senate



Issued July 1979

CONTENTS

| Foreword | |
|--|--|
| | 1 |
| Authorities and responsibilíties | 1 |
| Organization | 5 |
| Federal inspection | 8 11 |
| State inspection | 13 |
| Imports and exports | 17 |
| Support staff and activities Technical Services Science Compliance | 19 23 |
| Major initiatives Nitrosamines and nitrites Net weight Drug residues in meat Import information system | 31 31 33 33 35 |
| Summary of other developments Salmonella advisory committee. Codex alimentarius commission. Poultry Inspection Additives Mechanically processed (species) product. Mechanically deboned poultry. Labeling | 36 36 36 36 37 38 38 |

MEAT AND POULTRY INSPECTION 1978

Report of the Secretary of Agriculture to the Committee on Agriculture, House of Representatives Committee on Agriculture, Nutrition, and Forestry, U.S. Senate

FOREWORD

This report to the Committee on Agriculture of the U.S. House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the U.S. Senate is submitted as required by section 301(c)(4) of the Federal Meat Inspection Act (21 U.S.C. 661), section 17 of the Wholesome Meat Act (21 U.S.C. 691), and sections 27 and 5(c)(4) of the Poultry Products Inspection Act, as amended (21 U.S.C. 470 and 21 U.S.C. 454).

Section 20 of the Federal Meat Inspection Act (21 U.S.C. 620) also calls for an annual report to Congress on the Foreign Meat Inspection Program. This report was submitted to Congress earlier this year.

MEAT and POULTRY INSPECTION REGIONS and AREA OFFICES AUTHORITIES AND RESPONSIBILITIES

The Federal Meat Inspection Act and the Poultry Products Inspection Act, as amended, require the Secretary of Agriculture to inspect the slaughter of certain domestic livestock and poultry and the processing of meat and poultry products thereof. The primary objective of this inspection is to ensure that meat and poultry products distributed to consumers are wholesome, not adulterated, and properly marked, labeled, and packaged. In carrying out this complex task, the Secretary has jurisdiction from the time livestock and poultry are received at the slaughtering establishment until the finished products are distributed in commerce to consumers or otherwise distributed subject to the Acts.

Establishments preparing meat and poultry products for sale or distribution in interstate or foreign commerce are required to have Federal inspection unless exempted under the Acts. Those doing intrastate business in certain "nondesignated States" operate under State inspection programs that are required to effectively enforce requirements at least equal to those under the Federal Acts. Support is extended by USDA to State programs in the form of funds, training, and technical assistance. Federal inspection is required to be extended to intrastate operations in those "designated" States that do not develop or maintain an inspection program with requirements at least equal to those under the Federal Acts.

USDA is responsible for applying uniform standards with respect to sanitation, inspection procedures, and product labeling at all establishments under Federal inspection. It is also responsible for assessing the effectiveness of State inspection programs to assure that standards at least equal to those under the Federal Meat Inspection Act and the Poultry Products Inspection Act are being applied by the States to meat and poultry establishments under their jurisdiction.

USDA, through its Compliance Program, also conducts reviews and investigates for possible violations of the meat and poultry inspection laws.

This report discusses these activities in more detail and summarizes for Congress USDA's achievements in fulfilling its 1978 Meat and Poultry Inspection (MPI) responsibilities.

MEAT and POULTRY INSPECTION REGIONS and AREA OFFICES



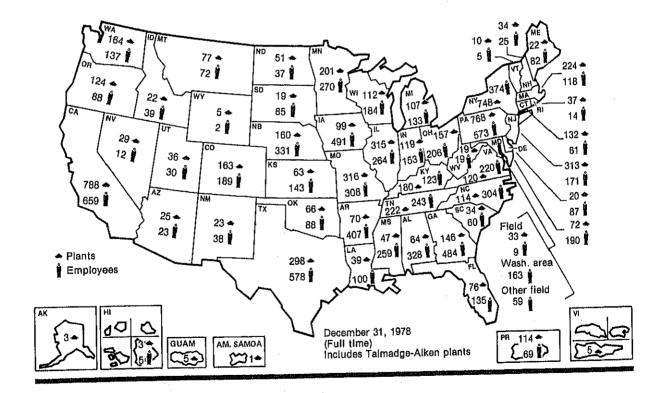
() REGIONAL HEADQUARTERS

AREA OFFICE - AREA OFFICE ALSO IN SAN JUAN, PUERTO RICO FOR PUERTO RICO AND THE U.S. VIRGIN ISLANDS. THE AREA OFFICE IN OLYMPIA, WASHINGTON SERVICES ALASKA AND THE AREA OFFICE IN SALEM, OREGON SERVICES HAWAII, GUAM, AND AMERICAN SAMOA.

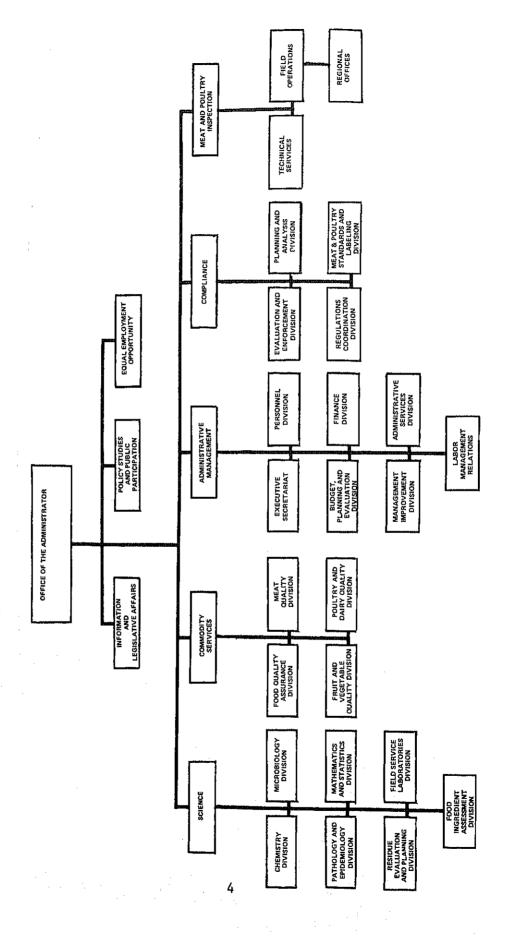
Table 1--Federal inspection--December 31, 1978

| Type of Activity | Meat establish- ments | Poultry establish- ments | Meat/ poultry establishments | Total |
|--------------------------------|-----------------------------|--------------------------------|------------------------------------|--------------|
| Slaughtering operations only | 318 | 200 | - | 518 |
| Processing operations only | 2,796 | 286 | 1,830 | 4,912 |
| Slaughtering and processing | 1,114 | 176 | 246 | 1,536 |
| TOTAL | 4,228 | 662 | 2,076 | 6,966 |
| Talmadge-Aiken plants TOTAL | 185 4,413 | 6 668 | 57 2,133 | 248 7,214 |

Federally Inspected Plants and Inspectors by Location



Food Safety and Quality Service



ORGANIZATION

Responsibility for administration of the meat and poultry inspection laws is assigned to the Food Safety and Quality Service (FSQS). The organizational structure includes three deputy administrators who are responsible for Meat and Poultry Inspection, for Science, and for Compliance.

The Deputy Administrator for Meat and Poultry Inspection directs two organizational units: Field Operations and Technical Services. The Field Operations Unit, through 5 regional offices and 37 area offices, directs the field force of meat and poultry inspectors who enforce regulations in inspected establishments. It includes a Foreign Programs Staff which assesses the effectiveness of inspection programs in countries exporting products to the United States, and coordinates the inspection of imported meat and poultry products at U.S. ports of entry prior to their release by the Customs Service. Field Operations also includes a Federal-State programs staff that coordinates reviews of State programs to evaluate whether they are maintaining inspection programs with requirements at least equal to those under the Federal Acts.

The Technical Services unit comprises a wide range of supporting functions. These functions include the development and application of standards for inspection procedures, plant facilities, equipment, product composition, environmental sanitation, work standards, and automated data processing. Technical Services also provides training for all inspection personnel.

The Deputy Administrator for Science provides laboratory support in various disciplines, including pathology, epidemiology, toxicology, chemistry, and microbiology. The Science Program also provides statistics and mathematics support. The Science and Technical Services staffs are located in Washington, with the exception of regional laboratories, data processing centers, and training centers.

The Deputy Administrator for Compliance provides enforcement support through monitoring the activities of persons and firms engaged in the distribution of meat and poultry products. This program also conducts reviews of federally inspected meat and poultry establishments to monitor the effectiveness of the inspection program. Compliance is also responsible for the establishment of meat and poultry standards and labeling requirements.

The task of assuring that meat and poultry products are safe, wholesome, and accurately labeled is monumental. During 1978, the Food Safety and Quality Service provided inspection in 7,214 plants under Federal inspection (table 2), and monitored activites in 7,663 plants under State inspection (table 6). To fulfill the inspection and supervision requirements of the meat and poultry inspection laws, the services of 9,700 full-time, 1,142 part-time and intermittent Federal employees, and 3,600 State employees were required. To provide the necessary scientific and compliance support for the inspection program, the services of 443 full-time and 62 part-time and intermittent Federal employees were required.

Table 2--Federally inspected establishments by States--December 31, 1978

| State or territory | Meat establish- ments | Poultry establish- ments | Meat/ poultry establishments | Total establish- ments |
|--------------------------|-----------------------------|--------------------------------|------------------------------------|------------------------------|
| Alabama | 22 | 24 | 18 | 64 |
| American Samoa | 1 | | | 1 |
| Arizona | 13 | 1 | 11 | 25 |
| Arkansas | 11 | 36 | 17 | 64 |
| California | 432 | 72 | 284 | 788 |
| Alaska | 1 | *** | | 1 |
| Colorado | 121 | 5 | 37 | 163 |
| Connecticut | 82 | 8 | 42 | 132 |
| Delaware | 4 | 6 | 2 | 12 |
| Dist. of Columbia | 22 | 6 | 5 | 33 |
| Florida | 40 | 5 | 31 | 76 |
| Georgia | 35 | 43 | 27 | 105 |
| Guam | 3 | | 2 | 5 |
| Hawaii | 1 | | 1 | 2 |
| Idaho | 19 | | 3 | 22 |
| Illinois | 186 | 18 | 77 | 281 |
| Indiana | 62 | 18 | 30 | 110 |
| Iowa | 69 | 7 | 23 | 99 |
| Kansas | 39 | 2 | 22 | 63 |
| Kentucky | 130 | • 7 | 43 | 180 |
| Louisiana | 24 | 5 | 9 | 38 |
| Maine | 7 | 7 | 8 | 22 |
| Maryland | 26 | 15 | 14 | 55 |
| Massachusetts | 138 | 22 | 64 | 224 |
| Michigan | 63 | 7 | 20 | 90 |
| Minnesota | 73 | 21 | 107 | 201 |
| Mississippi | 10 | 19 | 10 | 39 |
| Missouri | 226 | 25 | 65 | 316 |
| Montana | 30 | | 47 | 77 |
| Nebraska | 97 | 9 | 54 | 160 |
| Nevada | 5 | 2 | 22 | 29 |
| New Hampshire | 19 | 3 | 12 | 34 |
| New Jersey | 192 | 14 | 107 | 313 |
| New Mexico | 14 | ÷ 1m | 9 | 23 |
| New York | 476 | 35 | 237 | 748 |
| North Carolina | 41 | 25 | 19 | 85 |

Table 2--Federally inspected establishments by States--(Continued)

| State or territory | Meat establish- ments | Poultry establish- ments | Meat/ poultry establishments | Total establish ments |
|---------------------------------|-----------------------------|--------------------------------|------------------------------------|-----------------------------|
| PAGE VINE TYPE VALLE AND A SALE | | | | |
| North Dakota | 35 | | 16 | 51 |
| Ohio | 108 | 13 | 34 | 155 |
| Oklahoma | 36 | 4 | 11 | 51 |
| Oregon | 96 | 8 | 20 | 124 |
| Pennsylvania | 546 | 58 | 164 | 768 |
| Puerto Rico | 83 | 3 | 28 | 114 |
| Rhode Island | 25 | 4 | 8 | 37 |
| South Carolina | 8 | 6 | 8 | 22 |
| South Dakota | 13 | 3 | 3 | 19 |
| Tennessee | 135 | 15 | 72 | 222 |
| Texas | 170 | 28 | 100 | 298 |
| Utah | 20 | 7 | 7 | 34 |
| Vermont | 4 | m en | 6 | 1 0 |
| Virginia | 35 | 16 | 25 | 76 |
| Virgin Islands | 2 | Bull desi | 3 | 5 |
| Washington | 109 | 12 | 43 | 164 |
| West Virginia | 9 | 3 | 7 | 19 |
| Wisconsin | 59 | 15 | 38 | 112 |
| Wyoming | 1 | | 4 | 5 |
| TOTAL | 4,228 | 662 | 2,076 | 6,966 |
| Talmadge-Aiken plants | 185 | 6 | 57 | 248 |
| TOTAL | 4,413 | 668 | 2,133 | 7,214 |

FEDERAL INSPECTION

Inspection falls into three general categories: ante-mortem and post-mortem, sanitation, and product processing.

ANTE-MORTEM AND POST-MORTEM INSPECTION

Poultry and animals are examined for signs of disease or abnormality before slaughter. Following slaughter, each individual carcass and its viscera are inspected carefully to establish the wholesomeness of the carcass and organs intended for human consumption. Those that do not pass inspection are condemned and destroyed for human food purposes. The magnitude of the overall task can be measured by the number of animals and birds inspected in 1978--over 117 million livestock (table 3) and 3.8 billion birds (table 4).

Since the disposition of carcasses and parts of carcasses has major public health and economic importance, it is essential that inspectors accurately apply uniform standards. For these reasons, veterinary supervisors monitor disposition procedures and the work of the inspectors assigned to each establishment. Staff specialists continually review the inspection standards, and revise standards or develop new standards, as necessary, to ensure that inspection is carried out in an effective and efficient manner. Further, staff specialists conduct meetings in each region to ensure that veterinary inspectors supervising the work use the same standards in making dispositions of animals, carcasses, and parts.

Table 3--Number of livestock federally inspected, 1974-78

| | | Thous | ands | | |
|---------------|---------|---------|---------|---------|---------|
| Species | 1974 | 1975 | 1976 | 1977 | 1978 |
| Cattle | 33,318 | 36,903 | 38,991 | 37,025 | 36,257 |
| Calves | 2,355 | 3,896 | 4,437 | 4,316 | 3,438 |
| Hogs | 77,071 | 64,927 | 70,457 | 69,202 | 72,024 |
| Goats | 72 | 49 | 40 | 48 | 44 |
| Sheep & lambs | 8,556 | 7,550 | 6,474 | 5,752 | 4,988 |
| Equine | 207 | 247 | 293 | 325 | 334 |
| TOTAL | 121,579 | 113,572 | 120,692 | 116,668 | 117,085 |

Table 4--Number of poultry federally inspected, 1974-78

| Class | 1974 | 1975 | 1976 | 1977 | 1978 |
|--------------------------|-----------|-----------|-----------|-----------|-----------|
| | | Tho | usands | | , |
| Young chickens | 2,904,727 | 2,927,590 | 3,260,340 | 3,344,593 | 3,533,252 |
| Mature chickens | 193,328 | 175,718 | 180,135 | 192,840 | 191,727 |
| Fryer-roaster turkeys | 13,901 | 12,276 | 12,627 | 9,431 | 6,878 |
| Young turkeys | 111,540 | 106,214 | 120,610 | 117,930 | 124,239 |
| Old turkeys | 1,308 | 956 | 1,098 | 964 | 999 |
| Ducks | 11,552 | 11,453 | 13,161 | 13,750 | 15,485 |
| Geese | 363 | 341 | 323 | 374 | 470 |
| Rabbits 1/ | 718 | 651 | 779 | 849 | 717 |
| Others | 11 | 19 | 6 | 8 | 6 |
| TOTAL | 3,237,418 | 3,235,218 | 3,589,079 | 3,680,739 | 3,873,773 |

 $[\]underline{1}$ / These animals were inspected under the voluntary inspection program pursuant to the Agriculture Marketing Act of 1946, as amended (7 U.S.C. 1621 $\underline{\text{et}}$ $\underline{\text{seq}}$.).

SANITATION INSPECTION

Inspectors are assigned to conduct sanitation inspections at slaughtering and processing plants in order to assure that such plants are producing wholesome food. Immediate corrective action is required when unsanitary conditions are found. If a product may become adulterated because of unsanitary conditions, inspection is withheld and plant operations cease. Inspection service may be withdrawn if a plant, after appropriate notice, fails to eliminate unsanitary conditions.

FSQS emphasizes continuing improvement of sanitation practices in meat and poultry establishments. Priority has been placed on microbiological control, and establishments are encouraged to develop microbiological monitoring programs. FSQS provides assistance in developing and implementing different types of monitoring programs, and there are presently more than 180 establishments with accepted or pending programs.

PRODUCT PROCESSING INSPECTION

Advances in production technologies have created the need for quality control procedures. The consumer and the processor both benefit from increased efficiency and improved product control systems.

The industry continues to show interest in improved systems to control plant operations. This creates good rapport between industry and the Department, and it promotes compliance with the law. Approximately 350 revised or new quality control procedures have been reviewed and approved, and these procedures have enhanced the traditional inspection methods. Benefits which result from improved quality control include industry concern for product compliance, more industry participation in the regulatory process, increased consumer protection, increased costs return to industry, and lower overall inspection costs for the Department.

Table 5--Processed meat and poultry products inspected, $1974-78\frac{1}{2}$

| Product | | 1974 | 1975 | 1976 | 1977 | 1978 | |
|---------------------|--------------|--------|-------------|--------|------|----------|--|
| | | [mil] | ion pounds] | | | <u> </u> | |
| | | fmttt | ton bounds! | | | | |
| Meat products | 54,259 | 51,663 | 58,639 | 63,407 | | 66,168 | |
| Poultry products | 18,723 | 17,812 | 22,759 | 24,900 | | 27,770 | |
| TOTAL | 72,982 | 69,475 | 81,398 | 88,307 | | 93,938 | |

 $[\]underline{1}/$ These data represent the total weight of finished products including the weight of nonmeat ingredients. In addition, there is some multiple counting of complex products. These require inspection at intermediate steps in production.

ORGANIZATION

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| Arkansas | 11 | 36 | 17 | 64 |
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| Colorado | 121 | 5 | 37 | 163 |
| Connecticut | 82 | 8 | 42 | 132 |
| Delaware | 4 | 6 | 2 | 12 |
| Dist. of Columbia | 22 | 6 | 5 | 33 |
| Florida | 40 | 5 | 31 | 76 |
| Georgia | 35 | 43 | 27 | 105 |
| Guam | 3 | | 2 | 5 |
| Hawaii | 1 | es m | 1 | 2 |
| Idaho | 19 | en m | 3 | 22 |
| Illinois | 186 | 18 | 77 | 281 |
| Indiana | 62 | 18 | 30 | 110 |
| Iowa | 69 | 7 | 23 | 99 |
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| Kentucky | 130 | 7 | 43 | 180 |
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| Massachusetts | 138 | 22 | 64 | 224 |
| Michigan | 63 | 7 | 20 | 90 |
| Minnesota | 73 | 21 | 107 | 201 |
| Mississippi | 10 | 19 | 10 | 39 |
| Missouri | 226 | 25 | 65 | 316 |
| Montana | 30 | | 47 | 77 |
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| Nevada | 5 | 2 | 22 | 29 |
| New Hampshire | 19 | 3 | 12 | 34 |
| New Jersey | 192 | 14 | 107 | 313 |
| New Mexico | 14 | | 9 | 23 |
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| State or territory | Meat establish- ments | Poultry establish- ments | Meat/ poultry establishments | Total establish- ments |
|--------------------------|-----------------------------|--------------------------------|------------------------------------|------------------------------|
| | 17 | | | |
| North Dakota | 35 | 29 bbs | 16 | 51 |
| Ohio | 108 | 13 | 34 | 155 |
| Oklahoma | 36 | 4 | 11 | 51 |
| Oregon | 96 | 8 | 20 | 124 |
| Pennsylvania | 546 | 58 | 164 | 768 |
| Puerto Rico | 83 | 3 | 28 | 114 |
| Rhode Island | 25 | 4 | 8 | 37 |
| South Carolina | 8 | 6 | 8 | 22 |
| South Dakota | 13 | 3 | 3 | 19 |
| Tennessee | 135 | 15 | 72 | 222 |
| Texas | 170 | 28 | 100 | 298 |
| Utah | 20 | 7 | 7 | 34 |
| Vermont | 4 | м ы | 6 | 10 |
| Virginia | 35 | 16 | 25 | 76 |
| Virgin Islands | 2 | | 3 | 5 |
| Washington | 109 | 12 | 43 | 164 |
| West Virginia | 9 | 3 | 7 | 19 |
| Wisconsin | 59 | 15 | 38 | 112 |
| Wyoming | 1 | | 4 | 5 |
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| Calves | 2,355 | 3,896 | 4,437 | 4,316 | 3,438 | | |
| Hogs | 77,071 | 64,927 | 70,457 | 69,202 | 72,024 | | |
| Goats | 72 | 49 | 40 | 48 | 44 | | |
| Sheep & lambs | 8,556 | 7,550 | 6,474 | 5,752 | 4,988 | | |
| Equine | 207 | 247 | 293 | 325 | 334 | | |
| TOTAL | 121,579 | 113,572 | 120,692 | 116,668 | 117,085 | | |
| | | | | | | | |

Table 4--Number of poultry federally inspected, 1974-78

| Class | 1974 | 1975 | 1976 | 1977 | 1978 |
|--|-----------|-----------|-----------|-----------|-----------|
| ************************************** | | Tho | usands | <u> </u> | 169 |
| Young chickens | 2,904,727 | 2,927,590 | 3,260,340 | 3,344,593 | 3,533,252 |
| Mature chickens | 193,328 | 175,718 | 180,135 | 192,840 | 191,727 |
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| Young turkeys | 111,540 | 106,214 | 120,610 | 117,930 | 124,239 |
| Old turkeys | 1,308 | 956 | 1,098 | 964 | 999 |
| Ducks | 11,552 | 11,453 | 13,161 | 13,750 | 15,485 |
| Geese | 363 | 341 | 323 | 374 | 470 |
| Rabbits ¹ / | 718 | 651 | 779 | 849 | 717 |
| Others | 11 | 19 | 6 | 8 | 6 |
| TOTAL | 3,237,418 | 3,235,218 | 3,589,079 | 3,680,739 | 3,873,773 |

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Table 5--Processed meat and poultry products inspected, 1974-78 $^{\underline{1}}$

| Product | | 1974 | 1975 | 1976 | 1977 | 1978 |
|---------------------|--------|--------|-------------|--------|------|--------|
| | | [mill | ion pounds] | | | |
| Meat products | 54,259 | 51,663 | 58,639 | 63,407 | | 66,168 |
| Poultry products | 18,723 | 17,812 | 22,759 | 24,900 | | 27,770 |
| TOTAL | 72,982 | 69,475 | 81,398 | 88,307 | | 93,938 |

 $[\]underline{1}/$ These data represent the total weight of finished products including the weight of nonmeat ingredients. In addition, there is some multiple counting of complex products. These require inspection at intermediate steps in production.

Table 11--Compliance Activities, 1974-1978

| | 1974 | 1975 | 1976 | 1977 | 1978 |
|--|--------|--------|--------|--------|--------|
| Compliance reviews conducted | 43,163 | 42,786 | 44,367 | 46,723 | 51,317 |
| Apparent violations detected | 845 | 905 | 858 | 919 | 849 |
| Letters of warning issued | 955 | 990 | 1,105 | 1,047 | 1,024 |
| Cases referred to Department Office of Investigation | 51 | 60 | 25 | 12 | 18 |
| Cases referred to Department Office of General Counsel | 79 | 89 | 122 | 146 | 89 |
| Cases referred to Department of Justice by General Counsel | 38 | 58 | 74 | 89 | 90 |
| Cases prosecuted by Department of Justice | 14 | 12 | 8 | 26 | 56 |
| Detention actions on product | 769 | 931 | 955 | 1,021 | 790 |
| Establishments reviewed | 1,393 | 2,793 | 2,760 | 2,887 | 3,150 |

Table 12--Product labels reviewed, 1974-78

| Activity | 1974 | 1975 | 1976 | 1977 | 1978 | |
|---------------------|-----------------|-----------------|--------------------------|------------------|-------------------|--|
| Labels processed | 127,445 | 127,642 | 125,994 | 112,974 | 106,054 | |
| Labels not approved | 6,428 (5.1%) | 8,794 (6.8%) | 9,712 (7.7 <u>%</u>) | 10,030 (8.9%) | 13,430 (12.7%) | |
| | | | | ***** | | |

MAJOR INITIATIVES

The Food Safety and Quality Service is making considerable progress in achieving its goal of making available an abundance of nutritious, wholesome, and informatively labeled food which is profitable for the farmer yet affordable to Americans on all income levels. The remainder of this report discusses the activities which have been assigned priorities by this agency. Always first on the priority list is the protection of human health.

Nitrosamines and Nitrites

The Department of Agriculture and the Food and Drug Administration are faced with an extremely difficult situation with respect to nitrites. This substance has been used for many years in such traditional products as bacon, ham, and hotdogs as a preservative to prevent botulism, to impart the characteristic flavor, and to fix the color. In recent years, however, scientists have found that nitrites may, under certain conditions, lead to the formation of nitrosamines, which are carcinogenic. Accordingly, in May of 1978, the Department embarked on a course of regulatory action intended to eliminate nitrosamines, while retaining the use of reduced levels of nitrites to protect against the hazards of botulism.

Staff members of MPI's Technical Services and Field Operations, together with the Science Program staff, participated in regulatory actions pertaining to nitrosamines. The Ante-Mortem and Post-Mortem Inspection staff of Technical Services made significant contributions to a bacon task force to help bacon producers meet the nitrite restrictions imposed on their curing processes. The Methods Development Unit of Science's Chemistry Division conducted several laboratory studies to detect and quantify the amounts of nitrosamines in bacon. Also, the staff of Field Operations monitored each of the 207 bacon producing plants to ensure that the establishments complied with the restrictions imposed for nitrites on bacon.

The May 16, 1978, final rule to lower nitrite levels in bacon focused primarily on eliminating nitrosamine formations in bacon products. However, the scientific evidence indicating the carcinogenic nature of nitrosamines has also raised questions about the safety of nitrites themselves. As a result, the Food and Drug Administration commissioned the Massachusetts Institute of Technology (MIT) to study nitrites. The results of the MIT study, released in August 1978, indicated that nitrites, by themselves, may be carcinogenic to laboratory animals. This study is presently undergoing extensive review by independent scientists. In addition, an interagency task force is reviewing the MIT study. This review should be completed by early 1980.

If the review sustains the validity of the MIT study, thus indicating that nitrites alone are carcinogenic, the current Federal Meat Inspection Act would require immediate regulatory action. Knowing that this action might be

required, USDA last summer asked the Justice Department whether a gradual phaseout of nitrite, to allow for the development of alternatives to nitrite as a botulism inhibitor, would be permitted under our current statutory provisions. The Attorney General informed USDA in March 1979 that such action would not be permissible. Thus, if nitrite is found to be carcinogenic, the current law would require immediate regulatory action.

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In order to clarify the matter, the Department's Economics, Statistics, and Cooperatives Service (ESCS) was asked to carefully analyze all of the issues involved. The ESCS study should help answer questions that have been raised in reports of the Consumer Federation of America and the General Accounting Office. The ESCS report will assess the need for regulation changes, determine the effects the proposed changes would have on industry and consumers, and evaluate alternatives.

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In the past, Government regulators tended to blame producers for violation levels, primarily alleging lack of adherence to recommended withdrawal times. But neither increased testing and public exposure to the problem nor threats of more drastic regulatory action produced lower residue violation rates. However, last spring, the Food Safety and Quality Service tried a new approach to solving the drug residue problem. With the cooperation of the agricultural community, the Department conducted on-the-farm surveys to detect the real sources of the residues. The surveys found that other routes, such as contaminated premixed feed and recycled manure, were consistent sources of high residual levels. As a result of these surveys, a system has been implemented to assist producers whose hogs are found to have violative residues. Research is continuing on how and why residues occur.

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We have high expectations that these cooperative efforts to solve the problems of sulfonamide residues in swine and antibiotic residues in cull dairy cows will be successful. These approaches may prove to be more viable solutions than previous policies, since they entail less regulation of producers, lower costs to Government, and greater protection to the consumer.

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Inspection of poultry by today's traditional methods involves large numbers of people and numerous time-consuming hand procedures. The performance of these procedures results in inspection inefficiencies, limits the number of birds that can be inspected, and ultimately restricts poultry production.

Table 11--Compliance Activities, 1974-1978

| | 1974 | 1975 | 1976 | 1977 | 1978 |
|--|--------|--------|--------|--------|--------|
| Compliance reviews conducted | 43,163 | 42,786 | 44,367 | 46,723 | 51,317 |
| Apparent violations detected | 845 | 905 | 858 | 919 | 849 |
| Letters of warning issued | 955 | 990 | 1,105 | 1,047 | 1,024 |
| Cases referred to Department Office of Investigation | 51 | 60 | 25 | 12 | 18 |
| Cases referred to Department Office of General Counsel | 79 | 89 | 122 | 146 | 89 |
| Cases referred to Department of Justice by General Counsel | 38 | 58 | 74 | 89 | 90 |
| Cases prosecuted by Department of Justice | 14 | 12 | 8 | 26 | 56 |
| Detention actions on product | 769 | 931 | 955 | 1,021 | 790 |
| Establishments reviewed | 1,393 | 2,793 | 2,760 | 2,887 | 3,150 |

Table 12--Product labels reviewed, 1974-78

| Activity | 1974 | 1975 | 1976 | 1977 | 1978 |
|---------------------|-----------------|-----------------|-----------------|------------------|-------------------|
| Labels processed | 127,445 | 127,642 | 125,994 | 112,974 | 106,054 |
| Labels not approved | 6,428 (5.1%) | 8,794 (6.8%) | 9,712 (7.7%) | 10,030 (8.9%) | 13,430 (12.7%) |

MAJOR INITIATIVES

The Food Safety and Quality Service is making considerable progress in achieving its goal of making available an abundance of nutritious, wholesome, and informatively labeled food which is profitable for the farmer yet affordable to Americans on all income levels. The remainder of this report discusses the activities which have been assigned priorities by this agency. Always first on the priority list is the protection of human health.

Nitrosamines and Nitrites

The Department of Agriculture and the Food and Drug Administration are faced with an extremely difficult situation with respect to nitrites. This substance has been used for many years in such traditional products as bacon, ham, and hotdogs as a preservative to prevent botulism, to impart the characteristic flavor, and to fix the color. In recent years, however, scientists have found that nitrites may, under certain conditions, lead to the formation of nitrosamines, which are carcinogenic. Accordingly, in May of 1978, the Department embarked on a course of regulatory action intended to eliminate nitrosamines, while retaining the use of reduced levels of nitrites to protect against the hazards of botulism.

Staff members of MPI's Technical Services and Field Operations, together with the Science Program staff, participated in regulatory actions pertaining to nitrosamines. The Ante-Mortem and Post-Mortem Inspection staff of Technical Services made significant contributions to a bacon task force to help bacon producers meet the nitrite restrictions imposed on their curing processes. The Methods Development Unit of Science's Chemistry Division conducted several laboratory studies to detect and quantify the amounts of nitrosamines in bacon. Also, the staff of Field Operations monitored each of the 207 bacon producing plants to ensure that the establishments complied with the restrictions imposed for nitrites on bacon.

The May 16, 1978, final rule to lower nitrite levels in bacon focused primarily on eliminating nitrosamine formations in bacon products. However, the scientific evidence indicating the carcinogenic nature of nitrosamines has also raised questions about the safety of nitrites themselves. As a result, the Food and Drug Administration commissioned the Massachusetts Institute of Technology (MIT) to study nitrites. The results of the MIT study, released in August 1978, indicated that nitrites, by themselves, may be carcinogenic to laboratory animals. This study is presently undergoing extensive review by independent scientists. In addition, an interagency task force is reviewing the MIT study. This review should be completed by early 1980.

If the review sustains the validity of the MIT study, thus indicating that nitrites alone are carcinogenic, the current Federal Meat Inspection Act would require immediate regulatory action. Knowing that this action might be

required, USDA last summer asked the Justice Department whether a gradual phaseout of nitrite, to allow for the development of alternatives to nitrite as a botulism inhibitor, would be permitted under our current statutory provisions. The Attorney General informed USDA in March 1979 that such action would not be permissible. Thus, if nitrite is found to be carcinogenic, the current law would require immediate regulatory action.

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President Carter has set, as goals of his administration, improved regulatory procedures and reductions in both Federal expenditures and Federal employment. These goals demand that the Department find improved methods of inspection.

The Food Safety and Quality Service is exploring new ways to inspect poultry without sacrificing product safety and quality. To this end, we recently approved the first of a series of reforms to modernize poultry inspection. FSQS authorized a new, more efficient inspection method known as "modified traditional" inspection. The new method will be required for use where it would result in a realizable gain in inspection efficiency by achieving a savings in inspection manpower. In addition, it will be made available, upon request, where it can be used without loss of inspection efficiency.

This new inspection method was found to be as effective as traditional inspection in extensive field testing. The new procedure eliminates most of the time an inspector spends positioning a carcass for inspection—which can take up to 50 percent of the time under traditional methods. It also involves using mirrors to help the inspector see behind the carcass, virtually eliminating hand motions in positioning the carcass for inspection.

To assure that inspectors have sufficient time to perform the new procedures effectively, the Department has set a maximum speed of 70 birds per minute on a production line with three inspectors. The new inspection procedures will result in further efficiency for the poultry industry without creating the need for additional inspectors or sacrificing product safety.

The Department has also established uniform inspection rates for production lines utilizing traditional inspection. This was necessary because inspection rates varied throughout the United States, resulting from differing interpretations of Department guidelines by inspection officials in the field. This rate variation had concerned both the Department and the industry, and was the cause of a lawsuit in which a U.S. district court directed the Department to implement a uniform line speed policy.

Finally, it is our intention to continue to find and evaluate new methods beyond modified traditional inspection. New methods are essential if we are to further improve poultry inspection and reallocate resources to strengthen program weaknesses in areas such as the control and monitoring of chemical residues. The goal of these changes is to improve both efficiency and effectiveness of inspection.

<u>Additives</u>

The Federal Meat Inspection Act and the Poultry Products Inspection Act permit the use of only those food additives which have been evaluated and approved as safe by the Food and Drug Administration (FDA). Following FDA

approval, the Department determines whether or not an additive would otherwise adulterate meat or poultry. Under the Federal Meat Inspectic and the Poultry Products Inspection Act, the Department has the authori prohibit a food additive in meat or poultry even though FDA has determithat it would be safe in food.

USDA does not provide permanent approval for any additive. USDA ε FDA continually review approved chemicals to determine if approvals showed field or withdrawn.

Mechanically Processed (Species) Product

In 1976, the Department of Agriculture (USDA) proposed to allow production of meat mechanically removed from bones as "mechanically del meat," and its use in processed products, such as luncheon meat, with I labeling requirement to identify it other than the species, such as "be or "pork." Several consumer groups then sued the USDA in district cour The court said that USDA had not shown the product to be safe and had I required accurate labeling. As a result, the product was taken off the market in September 1976.

Subsequently, USDA convened a panel of scientists to review the pinely found it to be safe when used in limited quantities. However, and other things, the panel found that the product contains a greater amount calcium than ordinary meat because some finely ground, dust-like bone of through the sieves used in production.

In October 1977, the Department issued a proposed regulation based the panel's findings which required labels to state that a processed prontained "tissue from ground bone." Over 4,500 comments were received Many vigorously opposed allowing the product to be sold at all, and a number of people objected to use of the name "tissue from ground bone."

In June 1978, the Department issued final regulations which approof the product and required it to be labeled "Mechanically Processed (Species) Product," for example, "Mechanically Processed Beef Product. label must also contain the additional qualifying phrase, "Contains up % Powdered Bone." This label accurately informs the public about characteristics of the product, as was called for in the comments rece the proposed rule.

Mechanically Deboned Poultry

A health and safety evaluation similar to the one conducted for mechanically processed red meat products is being completed for mechanideboned poultry. The evaluation is being conducted with the advice an review of the members of the panel convened to evaluate mechanically processed meat products.

In addition, in the near future, USDA will be publishing a request for information to determine whether similar labeling should be required for mechanically processed poultry products. FSQS will ask for comments from the public, industry, Congress, and other interested parties on this issue so that a fully informed decision can be made as to whether any labeling change for poultry products is necessary.

Labeling

In 1978, USDA, in conjunction with the Food and Drug Administration and the Federal Trade Commission, sponsored a series of public hearings to determine what changes should be made in current labeling policies. A great number of consumers expressed their views at these hearings. In addition, the agencies have amassed a considerable amount of data from many public and private sources through letters and other means. They are presently analyzing this information in order to develop a comprehensive food labeling policy which will be most useful to consumers. They are interested in making changes that will provide consumers with information they need in a manner they can understand.